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## Special Topic / More Than Comic Books

*Bill Boerman-Cornell*

**Graphic novels are relevant to teachers and students in almost any content area.**

Every few days for the past three weeks, I have been giving a small pile of graphic novels to my friend Mary. She then gives them to one of her students at the high school where she teaches. He devours them within a day or two and sends them back. Through Mary, I have sent this student original literature, nonfiction history, biographies of mathematicians, popular fantasy, adaptations of adolescent novels, memoirs, and anything else I can think of. He loves some of it, likes some of it, and really doesn't care for some of it, but he *reads* all of it and always asks for more.

Graphic novels (book-length fiction or nonfiction narratives told using the conventions of a comic book) bring together text and image in a way that seems to capture students' imaginations. Right now, there is little more than anecdotal research about how graphic novels can be used within specific middle school and high school disciplines. But as we wait for the research to catch up, we can learn a great deal from looking closely at the graphic novels themselves to see how they might meet teachers' and students' needs.

### Why Use Graphic Novels?

Some of the best artists and writers working today are focused on this new and exciting format. Take a look at offerings like *Rapunzel's Revenge* by Dean Hale, Shannon Hale, and Nathan Hale (Bloomsbury, 2008); George O'Connor's excellent series on Greek mythology (*First Second*, 2010); *T-Minus* by Jim Ottaviani, Zander Cannon, and Kevin Cannon (Alladin, 2009); *Satchel Paige: Striking Out Jim Crow* by James Sturm and Richard Tommaso (Hyperion, 2007); and *Logicomix* by Apostolos Doxiadis, Christos H. Papadimitriou, Alecos Papadatos, and Annie Di Donna (Bloomsbury, 2009) to see the potential of graphic novels to engage students in literature, culture, science and engineering, history, and mathematics.

Because graphic novels use images and text closely integrated together, reading them builds within students the same skills they need for reading websites and magazines. At the same time, they may also help students learn traditional reading skills. Strong readers use their imaginations to turn words on the page into images in their minds. Graphic novels may offer students who are still developing imaging skills a way to build these skills by giving them some images but requiring them to imagine what happens between panels.

Finally, graphic novels can be an effective way to engage students who don't yet know that they love the subject you

are teaching.

## Dumbing Down?

Like any format for telling stories and passing on information, graphic novels include a range of reading levels. The material can be as rigorous as a physics textbook or as vapid as a tween movie adaptation.

Often, the images can act as a way of making difficult concepts or texts more comprehensible. For example, *Journey into Mohawk Country* is the diary of Dutch explorer Harman Van den Bogaert's 1634 journey among the Mohawk people in what is now northern New York State and Ontario to determine why the Mohawk preferred trading with the French over the Dutch. Van den Bogaert is not exactly a prose stylist; his diary is matter-of-fact and often dull. Consider this entry:

*When we, by my estimation, had covered eleven miles, we came at one hour into the cabin one half mile from the first castle [village]. No one was there but women. We would have continued on, but I could not move my feet because of the rough going. So we slept there. It was very cold, with a north wind. (O'Connor & Van den Bogaert, 2006)*

The graphic novel adaptation by George O'Connor (First Second, 2006) includes all the original text of the diary, but the images provide context that make the text more engaging and insightful. For example, one sequence shows the American Indian guide drawing open the hide covering the hut that the group has approached. When the guide sees there are only women in the hut, he replaces the hide, looking at the Dutch explorers with an expression that clearly indicates that this is not a good place for them to stop. In the next panel, the Dutch talk while the guide looks on with a stern expression. The next panel shows the explorers pointing to their tired feet, and the guide has his head down and a hand covering his eyes. The next panel shows Van den Bogaert entering the women's hut, his eyes wide.

The images give students the context they need to draw some conclusions. Clearly, the explorers are violating some sort of cultural taboo. Their guide is embarrassed. Throughout the rest of the book, the Dutch explorers display cultural insensitivity again and again, which may explain why the Mohawk are not interested in trading with the Dutch. Extensive notes at the end of the graphic novel describe O'Connor's research.

## Guiding Graphic Novel Reading

Before students read a graphic novel, their teacher needs to introduce some of the basic conventions of such novels. These conventions might include the usual arrangement of panels from left to right and top to bottom, as well as ways of navigating alternative panel arrangements; the conventions of speech and thought bubble borders (smooth equals normal speech, jagged indicates an excited voice, square or boxy indicates a mechanical sort of speech, and so on); and the shading of text boxes to indicate which character is narrating the story.

New graphic novel readers need to learn to make predictions on the basis of not only the text, but also the images. For example, the facial expressions of a character in the presence of another may imply a not-yet-revealed animosity or friendship, and an image of a potential hazard may portend a later plot turn.

Teachers should read the graphic novel they intend to teach several times and observe how these conventions are used. The teacher does not need to become an expert, however. In graphic novel book clubs I have conducted with students in 3rd grade through middle school, I have been amazed at how students have noticed storytelling techniques that I missed in five or six readings.

While students read, the teacher might ask them to show how they read a page, using their finger to indicate where their eye is going to check panel flow. The teacher might also ask questions about particular images, just as he or she might about the words in a text-only story: What is that character's attitude here? How can you tell? Also, just like with text-only works, asking a student to summarize the story will give the teacher a clear idea of whether the student is following the narrative.

## Graphic Novels in the Content Areas

The term *graphic novel* is a misnomer. Not all graphic novels are novels; many of them are nonfiction—biography, memoir, or straight informational nonfiction. Teachers in almost any discipline can find graphic novels for use in their classes.

### Math

*Logicomix* by Apostolos Doxiadis, Christos H. Papadimitriou, Alecos Papadatos, and Annie Di Donna (Bloomsbury, 2009) and *Suspended in Language* by Jim Ottaviani and Leland Purvis (G.T. Labs, 2004) illustrate the lives of mathematicians Bertrand Russell and Niels Bohr. *T-Minus* by Jim Ottaviani, Zander Cannon, and Kevin Cannon

(Alladin, 2009) is an amazing narrative of the United States' and Soviet Union's race to the moon in which the engineers and mathematicians are as much the heroes as the astronauts.

Besides telling fascinating math-related stories, graphic novels can also model mathematical problem solving. In *T-Minus*, an American engineer uses geometry to figure out that the Soviets hadn't really linked up two spacecraft in orbit; they just used perspective to make it seem that they had done so. Bertrand Russell's explanation in *Logicomix* of how a tautology can be logical but not really convey any information could be useful in lessons on mathematical logic. Some graphic novels also employ cryptography. Andrew Donkin and Giovanni Rigano's graphic novel adaptation of *Artemis Fowl* (Hyperion, 2007) by Eoin Colfer is one example.

Perhaps the greatest potential for teaching math through graphic novels lies in their ability to illustrate mathematical concepts by combining images with equations and explanations of the concepts under consideration. *Suspended in Language* is particularly good at this.

## Social Studies

Wineburg (1991) has suggested that middle school and high school students should be able to do more than just memorize dates and names of famous people; they should be able to contextualize, corroborate, and source different historical events and documents. Graphic novels can help students with all these skills, although some graphic novels do this better than others (Boerman-Cornell, 2012).

Graphic novels are most effective at contextualization. Images can provide quick social, economic, and cultural context through their depictions of clothing, buildings, transportation, and interpersonal interactions during different periods in history. They also can use panel divisions, parallel images, and text boxes to make quick yet clear transitions from place to place and time to time. This allows a graphic novel creator to juxtapose similar moments from several different events separated by time.

For example, the graphic novel *Still I Rise* by Roland Laird and Taneshia Nash Laird (Norton, 1997) depicts African American slaves' choice between serving in the loyalist army or the revolutionary army during the American Revolution as a fork between two dangerous paths. A similar image appears 20 pages later, when African Americans in the 1960s have the choice between jobless poverty and joining the army to fight in Vietnam. The image encourages readers to consider similarities between the two moments.

Graphic novels also offer opportunities for corroboration by gathering multiple eyewitness accounts into a single narrative. Joe Sacco, in both *Safe Area Gora?de* (Fantagraphics, 2002) and *Palestine* (Fantagraphics, 2001), uses many eyewitness reports. Sacco gives us a close-up of the face of the person whose account we are going to read, coupled with a text of his or her name. The panels that follow, whether 2 or 20, are part of that person's account.

Graphic novels can also assist with corroboration by requiring readers to interact with primary sources and other documents that traditional history books usually place in sidebars and appendixes that seem incidental to the main text. The late Howard Zinn, in *A People's History of American Empire* (coauthored by Mike Konopacki and Paul Buhle [Metropolitan Books, 2008]) embeds documents, newspaper articles, maps, charts, timelines, and more in the narrative.

Although some graphic novels carefully list sources, most do not do as well with sourcing as they do with the other two elements. Students could consider sources on their own by examining multiple stories from the same period. For example, Art Spiegelman's *Maus* (Pantheon, 1986), which tells a story of World War II from the perspective of a Holocaust survivor, could be contrasted with Carla Jablonski and Leland Purvis's *Resistance* (First Second, 2010), which covers the same period from the point of view of French resistance fighters. However, nothing about graphic novels seems to make them any better suited to comparing sources than a regular text version of a story would be.

## Science

Disciplinary thinking in science requires students to understand processes, use the scientific method, and pay particular attention to the value of observation. Graphic novel creator Jay Hosler focuses on observations of both small and large processes. His *Clan Apis* (Active Synapse, 2000) follows the life of a single bee. In so doing, he shows how ecosystems work, why life cycles are important, and why the food chain is vital. *Sandwalk Adventures* (Active Synapse, 2003) uses the contrivance of a conversation between Charles Darwin and a dust mite living on one of the hairs of his beard to examine the intricacies of natural selection and evolutionary theory.

Books like *Dignifying Science* (G.T. Labs, 2009) and *Laika* (First Second, 2007) can encourage kids to see science as something they could be part of. *Dignifying Science* by Jim Ottaviani, Donna Barr, Mary Fleener, and Ramona Fraden spotlights several pioneering female scientists. *Laika* by Nick Aranzis spotlights the Soviet dog who was the first animal to orbit the earth and the female scientist who took care of him.

Some graphic novels also explore the moral issues that scientists may confront. *Fallout* (G.T. Labs, 2001) and *Feynman* (First Second, 2011) present two different takes on how science interacts with government and the military. *Fallout* by Jim Ottaviani, Janine Johnston, Jeffrey Jones, and Chris Kemple mainly focuses on J. Robert Oppenheimer, the scientist who served as the project leader on the atomic bomb project. He struggled with the

tension between the military's need for secrecy and the scientists' need for open conversation. *Feynman* by Jim Ottaviani and Leland Myrick is a biography of Richard Feynman, who was so excited about learning new things he seemed to not care about the politics and security issues that Oppenheimer struggled with.

## Language Arts

Graphic novels useful for language arts can be generally divided into two categories: adaptations of classic stories and other well-known texts (for example, Sir Arthur Conan Doyle's *Hound of the Baskervilles*, which has been adapted by multiple artists) and new works (for example, Gene Yang's *American Born Chinese* [First Second, 2006]). By combining text and images, graphic novels offer additional ways to make intra- and inter-textual connections, allude to other works, establish characters, and develop themes through motifs.

The Common Core standards call on language arts teachers to teach multiple media, including websites and movies. The graphic novel offers another way to think about how narrative works in different modes. Images in graphic novels do not move, and they require imagination to make the leap from what is happening in one panel to the next. Graphic novels use time differently than movies do. The format also offers some interesting possibilities for postmodernist work; for example, in the graphic novel *Cairo* by G. Willow Wilson and M. K. Perker (Vertigo, 2007) a character reaches into the panel below him to retrieve a magic sword from a character who is keeping it from him.

Graphic novels also make compelling reading for some students and may prove an effective way to hold interest in reading during the crucial late elementary and middle school years.

## Art? Health? Physical Education?

Graphic novels employ a variety of styles of art and lettering, which makes them an excellent subject for art study and imitation. Before assigning students to create their own graphic novel, both the teacher and students need to spend some time figuring out how graphic novels work. Many student-generated graphic novels seem to include images that have no relation to each other from panel to panel, and text that doesn't directly connect to the images. See Scott McCloud's *Understanding Comics* (HarperCollins, 1993) for an excellent in-depth explanation of transitions and other techniques that can help students take full advantage of the meaning-making possibilities of the form.

Graphic novels also feature many allusions to other works of art. Edward Hopper's *Nighthawks*, Salvador Dali's *The Persistence of Memory*, and Grant Wood's *American Gothic* show up frequently in graphic novels and are a good reminder for students of the cultural relevance of art.

The content of some graphic novels, such as Katherine Arnoldi's *Amazing True Diary of a Teenage Single Mom* (Hyperion, 1998) is particularly useful for health class. Others might get kids interested in different physical activities. Such books as Siena Cherson Siegel's *To Dance, A Ballerina's Graphic Novel* (Atheneum, 2006) and James Sturm and Richard Tommaso's *Satchel Paige: Striking Out Jim Crow* (Hyperion, 2007) are particularly useful for getting students with little interest in sports to see how athletic endeavors involve a great deal of thinking and problem solving—and might not be so bad.

## A Place for Both

So are teachers just supposed to give up on regular books and give students graphic novels? Of course not. Teachers should not present graphic novels as an alternative to regular text-only reading, but as a different and useful format. And teachers might also consider graphic novels as another tool in differentiating reading instruction.

But it's important to remember that, just like text-only books, not all graphic novels are equally useful. Not all graphic novels are well written and well drawn. Not all graphic novels have significant themes and well-developed narratives. Not all graphic novels use the format well. And of course, not all graphic novels should be used in the classroom. As with regular books, the more excellent graphic novels a teacher is familiar with, the more effective she or he can be in using them.

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